

**TSK-GEL® ODS-100V**

Part Numbers:	21838, 1mm ID x 3.5cm, 3µm	21457, 2mm ID x 5cm, 5µm	21456, 4.6mm ID x 25cm, 5µm
	21839, 1mm ID x 5cm, 3µm	21458, 2mm ID x 15cm, 5µm	21814, Guard Cartridge for 2mm ID columns, 3µm, pkg of 3
	21813, 2mm ID x 3.5cm, 3µm	21831, 4.6mm ID x 5cm, 3µm	21841, Guard Cartridge for 2mm ID columns, 5µm, pkg of 3
	21812, 2mm ID x 5cm, 3µm	21830, 4.6mm ID x 7.5cm, 3µm	19308, Guard Cartridge Holder for 2mm ID Cartridges
	21811, 2mm ID x 7.5cm, 3µm	21829, 4.6mm ID x 15cm, 3µm	21453, Guard Cartridge for 4.6mm ID columns, pkg of 3
	21810, 2mm ID x 15cm, 3µm	21455, 4.6mm ID x 15cm, 5µm	19018, Guard Cartridge Holder for 4.6mm ID Cartridges

This sheet contains the recommended operating conditions and the specifications for TSK-GEL ODS-100V columns and Guardcolumns. Installation instructions and column care information are described in a separate Instruction Manual.

**A. OPERATING CONDITIONS**

1. Shipping Solvent: Acetonitrile
2. Max. Flow Rate: 0.22 mL/min (1.0mm ID, 2.0mm ID)  
1.2 mL/min (4.6mm ID)  
  
When a buffer with high viscosity is used, the maximum flow rate may have to be reduced so it doesn't exceed the maximum pressure drop. When changing solvents, use a flow rate equal to 25% of the maximum flow rate.
3. Standard Flow Rate: 0.02 - 0.05 mL/min (1.0mm ID)  
0.15 - 0.18 mL/min (2.0mm ID)  
0.7 - 1.0 mL/min (4.6mm ID)
4. Max. Pressure: 5.0 MPa (2.0mm ID x 5cm, 5µm)  
15.0 MPa (1.0mm ID x 3.5cm, 3µm; 1.0mm ID x 5cm, 3µm; 2.0mm ID x 1cm, 3µm; 2.0mm ID x 3.5cm, 3µm; 2.0mm ID x 5cm, 3µm; 4.6mm ID x 5cm, 3µm)  
15.0 MPa (4.6mm ID x 15cm, 5µm; 2.0mm ID x 15cm, 5µm)  
20.0 MPa (2.0mm ID x 7.5cm, 3µm; 4.6mm ID x 7.5cm, 3µm)  
20.0 MPa (4.6mm ID x 25cm, 5µm)  
25.0 MPa (2.0mm ID x 15cm, 3µm; 4.6mm ID x 15cm, 3µm)
5. pH Range: 2.0 - 7.5
6. Salt Conc. Range: No limitation
7. Organic Conc. Range: No limitation
8. Temperature: 10 - 50°C Reduce flow rate when operating below 10°C.
9. Cleaning Solvents: (1) High conc. solvent containing organic modifiers\*  
(2) Mixture of organic acids and high conc. organic modifiers\*  
\*Acetonitrile and methanol are recommended as a modifier.
10. Storage: Store the column in the shipping solvent if it will not be used within three days. Prevent air from entering the column. For overnight storage flush the column with mobile phase at 0.2mL/min.
11. Column Protection: An on-line filter (0.2-0.5µm) equipped between pump and injection valve is recommended. Guard columns prevent the column from a contamination of strongly adsorbed solutes. As a general rule, guard columns should be replaced after 30-40 sample injections or when peaks become excessively wide.

**B. SPECIFICATIONS**

The performance of TSK-GEL ODS-100V column is tested under the conditions described in the data sheet. All columns have passed the following quality control specifications:

1. Number of Theoretical Plates (N):

2,900 (1.0mm ID x 3.5cm, 3µm)	3,000 (2.0mm ID x 5cm, 5µm)
4,500 (1.0mm ID x 5cm, 3µm)	11,000 (2.0mm ID x 15cm, 5µm)
500 (2.0mm ID x 1cm, 3µm)	6,500 (4.6mm ID x 5cm, 3µm)
4,000 (2.0mm ID x 3.5cm, 3µm)	9,750 (4.6mm ID x 7.5cm, 3µm)
5,700 (2.0mm ID x 5cm, 3µm)	19,500 (4.6mm ID x 15cm, 3µm)
8,600 (2.0mm ID x 7.5cm, 3µm)	14,000 (4.6mm ID x 15cm, 5µm)
17,500 (2.0mm ID x 15cm, 3µm)	23,000 (4.6mm ID x 25cm, 5µm)
2. Asymmetry Factor (AF): 0.90 - 1.40 (1.0 mm ID x 3.5cm, 3µm)  
0.90 - 1.30 (1.0 mm ID x 5cm, 3µm)  
0.90 - 1.20 (2.0 mm ID, 3µm; 2.0 mm ID, 5µm; 4.6mm ID, 3µm)  
0.90 - 1.15 (4.6 mm ID, 5µm)

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